SCADAPack Controllers

More than just Monitoring and Control, SCADAPacks maximize the return on your SCADA investment.
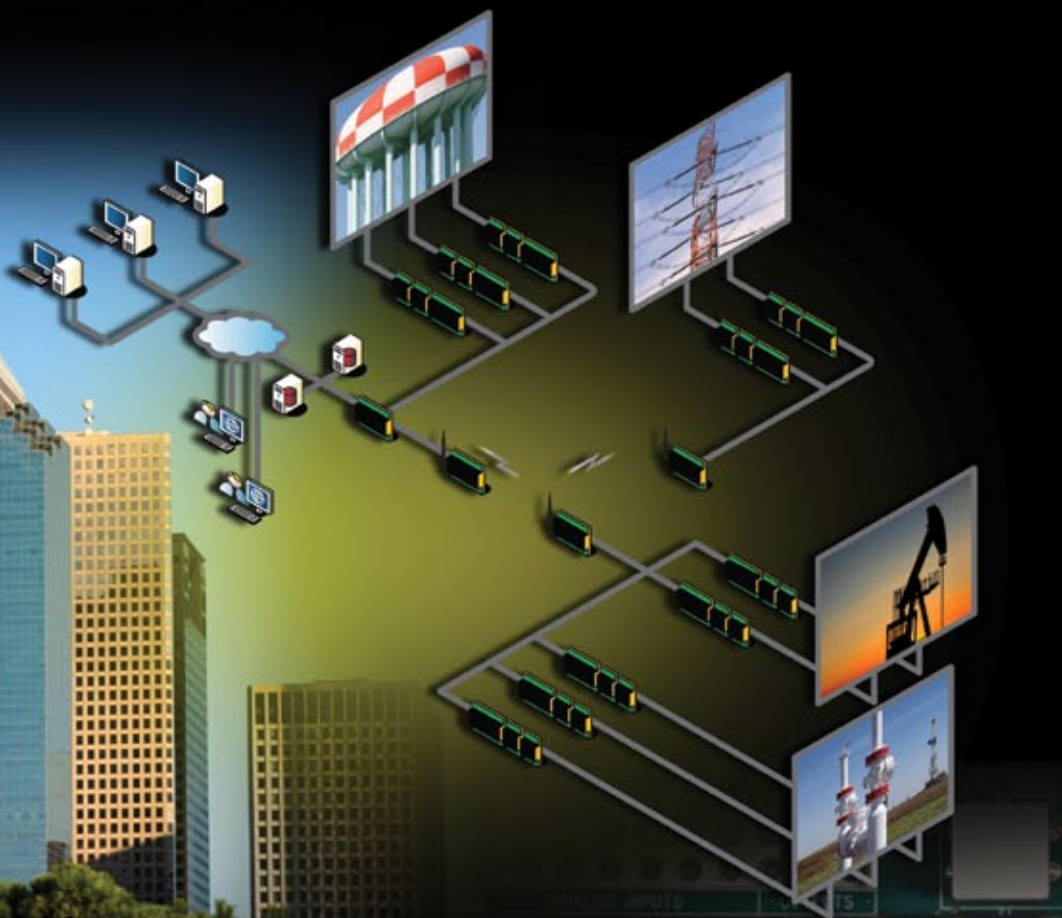
Control Microsystems is a global leader in the research, development, and supply of SCADA products, putting the power and flexibility of remote monitoring and control within your reach.

The industry-renowned SCADAPack Controller Series meets the rigorous demands of the SCADA industry, including a wide variety of process control and metering applications. SCADAPacks combine the monitoring and communications capabilities of remote terminal units (RTUs) with the processing and data-logging power of programmable logic controllers (PLCs), providing superior functionality wherever remote processes require automatic supervision and autonomous control.

The product line is designed for installations ranging from the plant floor to remote environments with extreme temperatures and humidity. The controllers integrate easily with most third party field and networking equipment, and operate under low or restricted power conditions. All SCADAPacks offer Class I, Division 2 Hazardous Area Rating, UL listing on select models, and are covered by an industry benchmark 3 year warranty.

SCADAPack

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Full-Featured Controllers

Communications

SCADAPack controllers offer a wide array of communication options through multiple serial ports, Ethernet interfaces, wireless options, protocols, and expansion modules.

Each independently operating RS-232 and RS-485 serial port can be configured uniquely, providing the flexibility of simultaneous protocol support, data concentration and message routing. Serial USB ports on select SCADAPacks further enhance connectivity when programming or upgrading the product's firmware. Multiple spread spectrum wireless options are available including built-in Trio modules.

Controllers equipped with a 10 or 100 Base-T Ethernet port benefit from multiple IP connections and high-speed data transfer thereby greatly increasing the number of possible system configurations.

SCADAPacks support industry-standard communication protocols:

- Serial-based Modbus RTU, Modbus ASCII and DNP3,
- Ethernet-based Modbus TCP, Modbus RTU in UDP, Modbus ASCII in UDP, DNP in TCP and DNP in UDP.

Local and remote connectivity through standard communication infrastructure is provided by a series of communication modules including:

- PSTN (dial-up)
- HART
- SDI-12
- Bell-202
- *Bluetooth*™

I/O

The SCADAPack series offers versatile solutions to I/O challenges. When unique installation and process requirements are a concern, flexibility in I/O selection is ensured with a variety of onboard I/O modules that provide useful I/O configurations while keeping critical panel space use to a minimum. Expansion beyond the SCADAPack controller's base I/O is easily handled with the addition of a Series 5000 expansion module, offering a variety of digital and analog I/O types. Any SCADAPack controller* can employ up to twenty expansion modules to provide an additional 700 process I/O points.

* Excluding SCADAPack 100 and SCADAPack ER.

Programming

Programmers of varying ability are easily accommodated with a selection of programming environments. SCADAPack controllers are programmed using either Relay Ladder Logic, IEC 61131-3 (multi-language standard) or C/ C++ which can operate separately in a multitasking role. For added flexibility, select SCADAPack controllers can execute up to 32 simultaneous C++ applications in addition to the logic application. All logic programming is handled locally or through existing network connections.

Data Logging

SCADAPack controllers offer a variety of data logging options for use in applications where critical data needs to be saved locally, either for later retrieval by a technician or for integration within a data management system. Depending on the model chosen, options include on-board data logging to RAM, USB mass storage or Compact Flash devices.

	SCADAPack314	SCADAPack330	SCADAPack334	SCADAPack350	SCADAPack357
	P314	P330	P334	P350	P357
Analog Inputs					
On-board	8, User-selectable, 0-20mA, 4-20mA, 0-5V, 0-10V	None	8, User-selectable, 0-20mA, 4-20mA, 0-5V, 0-10V	5, User-selectable, 0-10V or 0-20mA plus overrange 1, 0-32.7VDC	5, User-selectable, 0-10V or 0-20mA plus overrange 1, 0-32.7VDC 8, (0-2 0/4-20mA / 0-5/0-10V, software configurable)
Expansion[1]	128 channels	128 channels	128 channels	128 channels	128 channels
Analog Outputs					
On-board	Standard: None 2, 0-20mA/4-20mA with optional 5305 module	None	Standard: None 2, 0-20mA/4-20mA with optional 5305 module	Standard: None 2, 0-20mA/4-20mA with optional 5305	Standard: None 2 or 4, 0-20mA/4-20mA with two optional 5305 modules
Expansion[1]	64 channels	64 channels	64 channels	64 channels	64 channels
Digital Inputs					
On-board	16, 12/24V, 48V, 115/125V, 240V	None	16, 12/24V, 48V, 115/125V, 240V	8, User-selectable as dry contact inputs. Shared with output points.	8, User-selectable as dry contact inputs. Shared with output points. 32, (12/24V, 48V, 115/125V, 240V)
Expansion[1]	512 inputs	512 inputs	512 inputs	512 inputs	512 inputs
Digital Outputs					
On-board	10, dry contact relays or 10, solid-state relays paired with 12/24V DIs only (ATEX)	None	10, dry contact relays or 10, solid-state relays paired with 12/24V DIs only (ATEX)	8, User-selectable as open drain outputs. Shared with input points.	8, User-selectable as open drain outputs. Shared with input points. 16 (dry contact)
Expansion[1]	512 outputs	512 outputs	512 outputs	512 outputs	512 outputs
Frequency Inputs					
On-board	1, 0-10Hz or 0-5kHz (dry contact)	1, 0-10Hz or 0-5kHz (dry contact)	1, 0-10Hz or 0-5kHz (dry contact)	1, 0-10Hz (dry contact)	1, 0-10Hz (dry contact)
Expansion[1]	64 inputs	64 inputs	64 inputs	64 inputs	64 inputs
Turbine Inputs	2, 0-10kHz (turbine or dry contact)	2, 0-10kHz (turbine or dry contact)	2, 0-10kHz (turbine or dry contact)	2, 0-10kHz (turbine or dry contact)	2, 0-10kHz (turbine or dry contact)
Communication Ports	2, RS232/RS485	2, RS232/RS485 1, RS232	2, RS232/RS485 1, RS232	1, RS485 1, RS232/RS485 1, RS232	1, RS485 1, RS232/RS485 1, RS232
USB Ports	1, Peripheral Port: USB 2.0 Compliant "B" - type receptacle	←	1, Host Port: USB 2.0 Compliant "A" - type receptacle 1, Peripheral Port: USB 2.0 Compliant "B" - type receptacle		→
Integrated Ethernet Ports	None	←	1, 10/100BaseT		→
Serial Protocols	←	Modbus RTU, Modbus ASCII, DNP3 and DF1			→
Ethernet Protocols	N/A	←	Modbus TCP, Modbus RTU in UDP, Modbus ASCII in UDP, DNP in TCP, DNP in UDP		→
Network Protocols	N/A	←	IP, ARP, TCP, TFTP, UDP and ICMP		→
Optional Wireless[2]		Integrated with Trio (900MHz and 2.4GHz), FreeWave (900 MHz and 2.4 GHz) or MDS TransNET (900 MHz). Frequencies not available in all areas.			
12 / 24 VDC Converter	None	None	None	Yes	Yes
AGA Gas Flow Runs	4	4	4	4	4
DLOG Capacity to RAM (words)	454K	454K	454K	454K	454K
Mass Storage Device Support	N/A	←	USB memory stick connected to USB Host port		→
DNP Event Logging Capacity (events)					
TelePACE	19.3K	19.3K	19.3K	19.3K	19.3K
ISaGRAF	21.4K	21.4K	21.4K	21.4K	21.4K
C Programming[3]	←	GNU command line-based compiler, 32 executable applications supported			→

1 Using maximum of twenty Series 5000 expansion modules. Any combination of I/O modules may be used.
2 Available as an integrated option or stand-alone module
3 Compiler and Ctools sold separately

	SCADAPack32P	SCADAPack32 P4	SCADAPack32 P4A	SCADAPack32 P4B
Analog Inputs				
On-board	None	8 (0-20/4-20mA or 0-5/1-5V)	8 (0-20mA/0-10V jumper selectable) 1 (0-32.768V)	8 (0-20/4-20mA/0-5/0-10V software configurable)
Expansion[1]	128 channels	128 channels	128 channels	128 channels
Analog Outputs				
On-board	None	Standard: None 2, (0-20/4-20mA with optional 5303 board)	Standard: None 2, (0-20/4-20mA with optional 5305 board)	Standard: None 2, (0-20/4-20mA with optional 5305 board)
Expansion[1]	64 channels	64 channels	64 channels	64 channels
Digital Inputs				
On-board	3 (24VAC/30VDC, shared with Counter inputs) 1 (30V interrupt input)	3 (24VAC/30VDC, shared with Counter inputs) 1 (30V interrupt input) 16 (12-24/120/220V-VAC)	3 (24VAC/VDC, shared with Counter inputs) 1 (30V interrupt input) 32 (I/O selectable dry contact inputs, shared with digital outputs)	3 (24VAC/30VDC, shared with Counter inputs) 1 (30V interrupt input) 32 (12/24V, 48V, 115/125V, 240V)
Expansion[1]	512 inputs	512 inputs	512 inputs	512 inputs
Digital Outputs				
On-board	1 (Controller Status Output)	1 (Controller Status Output) 12 (dry contact)	1 (Controller Status Output) 32, (I/O selectable dry contact outputs, shared with digital inputs)	1 (Controller Status Output) 16 (dry contact)
Expansion[1]	512 outputs	512 outputs	512 outputs	512 outputs
Frequency Inputs				
On-board	3 (0-5 kHz, shared with Digital inputs) 1 (0-500Hz, interrupt input)	3 (0-5 kHz, shared with Digital inputs) 1 (0-500Hz, interrupt input)	3 (0-5 kHz, shared with Digital inputs) 1 (0-500Hz, interrupt input)	3 (0-5 kHz, shared with Digital inputs) 1 (0-500Hz, interrupt input)
Expansion[1]	64 inputs	64 inputs	64 inputs	64 inputs
Turbine Inputs	None	None	None	None
Communication Ports	2, RS232 1, RS232/RS485	3, RS232 1, RS232/RS485	3, RS232 1, RS232/RS485	2, RS232 1, RS232-RS485
Integrated Ethernet Ports	1, 10BaseT	1, 10BaseT	1, 10BaseT	1, 10BaseT
Serial Protocols	Modbus RTU, Modbus ASCII, DNP3, DF1, PPP			
Ethernet Protocols	Modbus TCP, Modbus RTU in UDP, Modbus ASCII in UDP, DNP in TCP, DNP in UDP			
Network Protocols	IP, ARP, TCP, TFTP, UDP and ICMP			
Optional Wireless[2]	Integrated with Trio (900MHz and 2.4GHz), FreeWave (900 MHz and 2.4 GHz) or MDS TransNET (900 MHz). Frequencies not available in all areas.			
12 / 24 VDC Converter	None	None	Yes	None
AGA Gas Flow Runs	10	10	10	10
DLOG Capacity (words)	454K	454K	454K	454K
DNP Event Logging Capacity (events)				
TelePACE	19.3K	19.3K	19.3K	19.3K
ISaGRAF	21.4K	21.4K	21.4K	21.4K
C++ Programmin[3]	Hitachi Embedded Workshop Windows-based compiler, 1 executable application supported, extensive debugging capabilities with optional interface			

1 Using maximum of twenty Series 5000 expansion modules. Any combination of I/O modules may be used.
2 Available as an integrated option or stand-alone module
3 Compiler and Ctools sold separately

SCADAPack100

P100

Analog Inputs	
On-board	3 (0-20/4-20mA/0-5/1-5 VDC) 1 (0-32.7 VDC)
Expansion[1]	N/A
Analog Outputs	
On-board	None
Expansion[1]	None
Digital Inputs	
On-board	6 (selectable as input or output)
Expansion[1]	N/A
Digital Outputs	
On-board	6 (selectable as input or output)
Expansion[1]	N/A
Frequency Inputs	
On-board	1, 0-6 kHz (turbine or dry contact)
Expansion[1]	N/A
Turbine Inputs	1
Communication Ports	1, RS232 1, RS232/RS485
Serial Protocols	Modbus RTU, Modbus ASCII, DNP3, DF1
Optional Wireless[2]	Integrated with Trio (900MHz and 2.4GHz), FreeWave (900 MHz and 2.4 GHz) or MDS TransNET (900 MHz). Frequencies not available in all areas.
12 / 24 VDC Converter	None
AGA Gas Flow Runs	1
DLOG Capacity (words)	183K
DNP Event Logging Capacity (events)	
TelePACE	11.3K
ISaGRAF	13.7K
C Programming[3]	Microtec command line-based compiler, 1 executable application supported

1 Using maximum of twenty Series 5000 expansion modules. Any combination of I/O modules may be used.
2 Available as an integrated option or stand-alone module
3 Compiler and Ctools sold separately

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